

Serial No. 09/698,676
Attorney Docket No. 090455-9307

IN THE CLAIMS

Please cancel claims 1 to 22, 24 and 28 and amend claims 23, 25 to 27, 29 and 31 to 34. Please also add new claims 35-41:

23. (Amended) An electronic toy capable of controlling motions arbitrarily in accordance with external inputs, comprising:

a head housing a drive motor and a transmission mechanism for transmitting rotational driving force to said drive motor;

a display provided to the front of said head for displaying the shape of the eyes;

first detection means provided on the top of said head for detecting the pressing thereof;

second detection means for detecting sound;

third detection means for detecting the peripheral brightness;

initialization means for setting the initial mode for a period after the power is turned on until a prescribed time elapses;

fourth detection means for detecting external inputs;

a plurality of counters for counting the number of detections from the first, second, third and fourth detection means while the initial mode is being set by said initialization means;

individual difference setting means for setting individual differences in accordance with the detection means having the highest count value among the respective count values of said plurality of counters;

a body housing a cam mechanism for transmitting rotational driving force to said drive motor via said transmission mechanism;

legs driven by said cam mechanism;

a lower jaw driven by said transmission mechanism;

ears driven by said transmission mechanism;

Serial No. 09/698,676
Attorney Docket No. 090455-9307

storage means for storing the respective motion patterns of said legs, lower jaw, and ears; and

a controller for selecting an arbitrary motion pattern among the plurality of motion patterns stored in said storage means in accordance with the timing of detection signals output from said first to third detection means, and controlling said drive motor and the display pattern of said display in accordance with the selected motion pattern.

25. (Amended) An electronic toy, comprising:

a body member having a head-shaped member disposed at an upper part of said body member and leg-shaped members movably disposed at lower parts of said body member, said head-shaped member being formed with a display disposed at a face portion of said head-shaped member, ear-shaped members movably coupled to said head-shaped member and a lower jaw-shaped member movably coupled to said head-shaped member;

a driving mechanism having a drive motor, a transmission mechanism functionally coupled to said drive motor so as to transmit a rotational driving force from said drive motor, and a cam mechanism driven by the rotational driving force transmitted from said transmission mechanism, wherein said ear-shaped members and said lower jaw-shaped member are driven by said transmission mechanism, wherein said leg-shaped members are driven by said cam mechanism;

storage means that stores data indicative of a plurality of motion patterns of said leg shaped members, said lower jaw-shaped member and said ear-shaped members, and data indicative of a plurality of eye expression patterns;

a plurality of sensors including a touch detection sensor disposed on a top of said head-shaped member so as to detect a touching action by a user, a sound detection sensor disposed so as to detect a sound made by the user, and an optical detection sensor disposed so as to detect a peripheral brightness;

a controller electrically coupled to said plurality of detection sensors, said drive motor and said display, wherein said controller selects a motion pattern among said plurality of motion patterns and an eye expression pattern among said plurality of eye expression patterns in accordance with a timing of detection signals received from said

Serial No. 09/698,676
Attorney Docket No. 090455-9307

detection sensors, and controls said drive motor and said display in accordance with the selected motion and eye expression patterns;

initialization means that sets an initial mode when the power is turned on;

a plurality of counters that respectively count the number of detections on said plurality of sensors while the initial mode is being set by said initialization means; and

character setting means that sets the character of the toy in accordance with the highest count value among the respective count numbers of said plurality of counters.

26. (Amended) An electronic toy comprising:

a body member having a head-shaped member disposed at an upper part of said body member and leg-shaped members movably disposed at lower parts of said body member, said head-shaped member being formed with a display disposed at a face portion of said head-shaped member, ear-shaped members movably coupled to said head-shaped member and a lower jaw-shaped member movably coupled to said head-shaped member;

a driving mechanism having a drive motor, a transmission mechanism functionally coupled to said drive motor so as to transmit a rotational driving force from said drive motor, and a cam mechanism driven by the rotational driving force transmitted from said transmission mechanism, wherein said ear-shaped members and said lower jaw-shaped member are driven by said transmission mechanism, wherein said leg-shaped members are driven by said cam mechanism;

storage means that stores data indicative of a plurality of motion patterns of said leg shaped members, said lower jaw-shaped member and said ear-shaped members; and data indicative of a plurality of eye expression patterns;

sensor means that detects external inputs;

a controller electrically coupled to said sensor means, said drive motor and said display, wherein said controller selects a motion pattern among said plurality of motion patterns and an eye expression pattern among said plurality of eye expression patterns in accordance with a timing of detection signals received from said sensor means, and controls said drive motor and said display in accordance with the selected motion and eye expression patterns;

Serial No. 09/698,676
Attorney Docket No. 090455-9307

initialization means that sets an initial mode when the power is turned on;
a counter that counts the number of detections on said sensor means while the
initial mode is being set by said initialization means; and

character setting means that sets the character of the toy pursuant to whether
the count number of said counter is an odd or even number.

27. (Amended) An electronic toy comprising:

a body member having a head-shaped member disposed at an upper part of
said body member and leg-shaped members movably disposed at lower parts of said body
member, said head-shaped member being formed with a display disposed at a face portion of
said head-shaped member, ear-shaped members movably coupled to said head-shaped
member and a lower jaw-shaped member movably coupled to said head-shaped member;

a driving mechanism having a drive motor, a transmission mechanism
functionally coupled to said drive motor so as to transmit a rotational driving force from said
drive motor, and a cam mechanism driven by the rotational driving force transmitted from
said transmission mechanism, wherein said ear-shaped members and said lower jaw-shaped
member are driven by said transmission mechanism, wherein said leg-shaped members are
driven by said cam mechanism;

storage means that stores data indicative of a plurality of motion patterns of
said leg shaped members, said lower jaw-shaped member and said ear-shaped members, and
data indicative of a plurality of eye expression patterns;

sensor means that detects external inputs;

a controller electrically coupled to said sensor means, said drive motor and
said display, wherein said controller selects a motion pattern among said plurality of motion
patterns and an eye expression pattern among said plurality of eye expression patterns in
accordance with a timing of detection signals received from said sensor means, and controls
said drive motor and said display in accordance with the selected motion and eye expression
patterns;

initialization means that sets an initial mode when the power is turned on;

Serial No. 09/698,676
Attorney Docket No. 090455-9307

a counter that counts the number of detections on said sensor means while the initial mode is being set by said initialization means; and

character setting means that sets the gender in accordance with the count number of said counter, and changes at least one among the expression of the eyes, sound, or motion corresponding to said set gender.

29. (Amended) An electronic toy capable of controlling motions arbitrarily in accordance with external inputs, comprising:

a selection switch for selecting between a character standard mode for performing motions of a standard specification character and a character rearing mode for rearing a character;

a memory for storing an initial setting for said character standard mode or said character rearing mode in accordance with the operation of said selection switch, wherein said character rearing mode is set by an initial setting of said memory for:

an immature period where said controlling data is not renewed at prescribed time intervals;

a rearing period where controlling data is renewed to emotion data with a level of control in accordance with the external inputs during a prescribed period of time; and

a completion-of-rearing period where motions are controlled in accordance with emotion data with a level of control renewed during said rearing period; and

a programmable controller responsive to said memory for performing motions in said character standard mode or said character rearing mode in accordance with the operation of said initial setting means.

30. (As Filed) An electronic toy according to claim 29, wherein said character standard mode is set by an initial setting associated with said memory, said programmable controller controlling motions on the basis of data of said standard mode.

31. (Amended) An electronic toy according to claim 30, wherein said character rearing mode is set by an initial setting associated with said memory, the controlling data

Serial No. 09/698,676
Attorney Docket No. 090455-9307

being renewed to provide emotion data with a level of control in accordance with the external inputs during a prescribed period of time, and motions controlled pursuant to said renewed emotion data.

32. (Amended) An electronic toy capable of controlling motions in accordance with external inputs, comprising:

a character mode selection switch;

initial setting means which, in response to an operation on said character mode selection switch, selects a character mode for the toy from a character standard mode for performing motions of a standard specification character and a character rearing mode for rearing a character; and

a programmable controller that controls motions of the toy in said character standard mode or in said character rearing mode in accordance with said initial setting means,

wherein, when said character standard mode is set, the motions of the toy are controlled in accordance with preset data,

wherein, when said character rearing mode is set, emotion data is renewed in accordance with external inputs, and the motions of the toy are controlled pursuant to said renewed emotion data, in which said character rearing mode comprises an immature period where said controlling data is not renewed; a rearing period where controlling data is renewed to provide the emotion data in accordance with the external inputs during a prescribed period of time; and a completion-of-rearing period where motions are controlled in accordance with the renewed emotion data.

33. (Amended) An electronic toy according to claim 32, wherein the emotion data is renewed in accordance with the frequency of input of sounds, food, contacts, etc. during said rearing period, and motions are controlled in accordance with said renewed emotion data.

34. (Amended) An electronic toy according to claim 32, wherein said programmable controller sets either a first controlling flag for performing actions pursuant to at least the content of instructions which are input, or a second controlling flag for performing

Serial No. 09/698,676
Attorney Docket No. 090455-9307

actions differing from said inputted instructions, and motions are controlled in accordance with the flag set.

35. (New) An electronic toy comprising:

a head-shaped member having a display disposed at a face portion of the head-shaped member, said display comprising a plurality of stacked plates each having a group of holes formed in a pattern, said patterns being formed in different shapes from each other, and a plurality of light sources each disposed at a side face of the corresponding plate so that, when one of said light sources is lit, the light from the lit source enters the corresponding plate and the group of holes formed thereon are illuminated to display the pattern formed with the group of holes;

a smoked plate mounted in front of said display;

memory means that stores data indicative of a plurality of eye expression patterns; and

a controller electrically coupled to said plurality of light sources, wherein said controller selects an eye expression pattern among said plurality of eye expression patterns and controls lighting of one or more of the light sources so as to illuminate the selected group or groups of holes to display the selected eye expression pattern.

36. (New) An electronic toy of claim 35, wherein said plurality of stacked plates are formed from acrylic plates, and said plurality of light sources are light emitting diodes (LEDs).

37. (New) An electronic toy of claim 36, further comprising: a body member having said head-shaped member disposed at an upper part of said body member and leg-shaped members movably disposed at lower parts of said body member; and

a driving mechanism having a drive motor electrically coupled to said controller, a transmission mechanism functionally coupled to said drive motor so as to transmit a rotational driving force from said drive motor, and a cam mechanism driven by the rotational driving force transmitted from said transmission mechanism, wherein said leg-shaped members are driven by said cam mechanism,

Serial No. 09/698,676
Attorney Docket No. 090455-9307

wherein said memory means further stores data indicative of a plurality of motion patterns of said leg-shaped members,

wherein said controller selects one of said plurality of motion patterns of said leg-shaped members and controls the drive motor so that the leg-shaped members move in the selected motion pattern whereby the toy artificially expresses an emotion by the combination of the selected motion pattern of the leg-shaped members and the selected eye expression pattern.

38. (New) An electronic toy comprising:

a head-shaped member having a display disposed at a face portion of the head-shaped member and formed with a plurality of illumination patterns;

a smoked plate mounted in front of said display;

memory means that stores data indicative of a plurality of eye expression patterns;

sensor means that detects external inputs; and

a controller electrically coupled to said display, wherein said controller selects an eye expression pattern among said plurality of eye expression patterns in response to information derived from said sensor means, and controls said display so as to provide one among said plurality of illumination patterns indicative of the selected eye expression pattern.

39. (New) An electronic toy according to claim 38, further comprising:

a body member having said head-shaped member disposed at an upper part of said body member and leg-shaped members movably disposed at lower parts of said body member; and

a driving mechanism functionally coupled to said leg-shaped members and electrically coupled to said controller;

wherein said memory means further stores data indicative of a plurality of motion patterns for said leg-shaped members,

wherein said controller selects, in response to information derived from said sensor means, an eye expression pattern among said plurality of eye expression patterns and a

Serial No. 09/698,676
Attorney Docket No. 090455-9307

motion pattern among said plurality of motion patterns for said leg-shaped members, and controls said display so as to provide one among said plurality of illumination patterns indicative of the selected eye expression pattern and controls said drive mechanism so as to move said leg-shaped members in accordance with the selected motion pattern.

40. (New) An electronic toy according to claim 23, wherein said individual difference setting means sets individual differences pursuant to whether the count value of said counter is an odd or even number.

41. (New) An electronic toy according to claim 23, wherein said individual difference setting means sets the gender in accordance with the count value of said counter, and changes at least one among the expression of the eyes, sound, or motion corresponding to said set gender.